

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A receiver for receiving an analogue signal in a communication system, where said analogue signal includes signal bursts that are varying within a first signal range (201), ~~and where said receiver (300) comprises~~ comprising:

at least two signal receiver branches (303, 304, 305) for receiving said analogue signal, ~~characterised in that: said at least two signal receiver branches (303, 304, 305) wherein the at least two signal receiver branches~~ are arranged to have dynamic ranges (401, 402) that are partly overlapping each other and together cover said first signal range (201) ~~and where said receiver further comprises:~~

means for evaluating (308) digital samples of said signal bursts (801) from said at least two signal receiver branches (303-305) in accordance with ~~certain criteria's~~ specific threshold levels; and

means for selecting (308) all digital samples corresponding to one signal burst (801) at the same time for further processing in said receiver, and where said ~~selected~~ sampled one signal burst (801) has been received via one of said at least two signal receiver branches (303, 304, 305).

2. (Currently Amended) The receiver as claimed in claim 1, wherein said selection means (308) is arranged to make said selection between sampled signal bursts corresponding to the same received signal burst which has been received in parallel by said at least two signal receiver branches.

Attorney Docket No. P12080

3. (Currently Amended) The receiver as claimed in claim 1, wherein at least one of said at least two signal receiver branches comprises attenuation means ~~(306, 311)~~ provided to attain said partly overlapping dynamic ranges ~~(401, 402)~~.

4. (Currently Amended) The receiver as claimed in claim 3, wherein the attenuation in said attenuation means ~~(306, 311)~~ is selected in such a way that said overlap between said dynamic ranges ~~(401, 402)~~ is at least equal to a defined required minimum signal range ~~(203)~~ for achieving an adequate signal reception performance in said receiver ~~(200)~~.

5. (Currently Amended) The receiver as claimed in claim 1, wherein one ~~(303)~~ of said at least two signal receiver branches is ~~essentially~~ un-attenuated.

6. (Currently Amended) The receiver as claimed in claim 3, wherein said attenuation means ~~(306, 311)~~ includes a resistor network.

7. (Currently Amended) The receiver as claimed in claim 3, wherein said at least one signal receiver branch ~~(304, 305)~~ that comprises attenuation means ~~(306, 311)~~ also includes amplifying means ~~(605a-b)~~.

8. (Currently Amended) The receiver as claimed in claim 7, wherein said amplifying means ~~(605a-b)~~ are arranged to amplify digital sampled signal bursts to compensate for the attenuation in said attenuation means ~~(306, 311)~~.

9. (Currently Amended) The receiver as claimed in claim 1, wherein said at least two signal receiver branches ~~(303, 304, 305)~~ comprises A/D-conversion means ~~(602a-d)~~, demodulation means ~~(601a-b)~~ and digital filtering means ~~(603a-b, 604a-d)~~ to generate said digital samples.

Attorney Docket No. P12080

10. (Currently Amended) The receiver as claimed in claim 1, wherein said means for evaluating said digital samples of said signal bursts includes means for storing ~~(308)~~ said digital samples.

11. (Currently Amended) The receiver as claimed in claim 10, wherein said means for selecting ~~(308)~~ is arranged to use the signal quality of said stored sampled signal bursts ~~(804)~~ to select said sampled signal burst for further processing in said receiver.

12. (Currently Amended) The receiver as claimed in claim 10, wherein said means for selecting ~~(308)~~ is arranged to compare the signal strength of said stored digital samples with a set of pre-defined threshold levels ~~(208)~~ to select said sampled signal burst for further processing in said receiver.

13. (Canceled).

14. (Currently Amended) The receiver as claimed in claim 1, wherein said means for selecting ~~(308)~~ is arranged to select sampled signal bursts from a first one of said at least two signal receiver branches ~~(304-305)~~ as long as said sampled signal bursts have a signal strength within a pre-determined signal strength interval or a signal quality within a pre-determined signal quality interval.

15. (Previously Presented) A transceiver, c h a r a c t e r i s e d in that said transceiver comprises at least one receiver as claimed in claim 1.

16. (Original) A base station, c h a r a c t e r i s e d in that said base station comprises at least one transceiver as claimed in claim 15.

17. (Previously Presented) A radio unit, c h a r a c t e r i s e d in that said radio unit comprises at least one receiver as claimed in claim 1.

18. (Currently Amended) A method in a communication system for receiving an analogue signal in a receiver, where said analogue signal includes signal bursts that are varying within a first signal range (201), and where said receiver (300) comprises at least two signal receiver branches (303, 304, 305) for receiving said analogue signal, ~~characterised in that said method comprises the following steps~~ the method comprising:

- processing (903-907) said analogue signal with signal bursts to digital sampled signal bursts in said at least two signal receiver branches (303, 304, 305) where said at least two signal receiver branches (303, 304, 305) are arranged to have dynamic ranges (401, 402) that are partly overlapping each other and together cover said first signal range (201);

- evaluating (908-910) said digital sampled signal bursts from said at least two signal receiver branches (303, 304, 305) in accordance with ~~certain criteria's~~ specific threshold levels; and

- selecting (910) one of said digital sampled signal bursts that has been processed by one of said at least two signal receiver branches (303, 304, 305) for further processing in said receiver.

19. (Currently Amended) The method as claimed in claim 18, wherein said step of selecting (910) performs a selection between sampled signal bursts corresponding to the same received signal burst in said analogue signal, and where said signal burst has been received in parallel by said at least two signal receiver branches.

20. (Currently Amended) The method as claimed in claim 18, wherein said step of processing said analogue signal to digital sampled signal bursts comprises the following steps:

- attenuating (903) said analogue signal to an attenuated analogue signal in all signal receiver branches (304, 305) except one, whereby one un-attenuated and at least one attenuated analogue signal are attained;

Attorney Docket No. P12080

-transforming ~~(904-906)~~ said attenuated and un-attenuated analogue signals to filtered digital sampled signal bursts by I/Q-demodulation, A/D-conversion and digital channel filtering;

-amplifying ~~(907)~~ said filtered digital sampled signal bursts corresponding to said attenuated analogue signals to amplified digital sampled signal bursts to restore the received signal strength.

-storing ~~(908)~~ said amplified digital sampled signal bursts and said filtered digital sampled signal bursts corresponding to said un-attenuated analogue signal in a memory in said receiver as said digital sampled signal bursts.

21. (Original) The method as claimed in claim 20, wherein the signal quality of said stored digital sampled signal bursts are used to select said sampled signal burst for further processing in said receiver.

22. (Currently Amended) The method as claimed in claim 20, wherein the signal strength of said stored digital sampled signal bursts are compared with a set of pre-defined threshold levels ~~(208)~~ to select said sampled signal burst for further processing in said receiver.

23. (Canceled).

24. (Currently Amended) The method as claimed in claim 18, wherein each one of the digital samples is an I/Q-pair and that said step of evaluating ~~(908-910)~~ comprises the step of calculating ~~(909)~~ the signal amplitude of said I/Q-pairs before said step of selecting ~~(910)~~.

25. (New) A receiver comprising:

a band-pass filter for receiving an incoming analog signal wherein the analog signal includes signal bursts that are varying within a signal range,

an amplifying means in communication with the band-pass filter for amplifying the incoming analog signal from the band-pass filter,

Amendment - PAGE 6 of 13
EUS/J/P/04-8770

Attorney Docket No. P12080

a plurality of signal receiver branches in communication with the amplifying means, wherein each signal receiver branch attenuates and processes the incoming analog signal into a digital signal such that each signal receiver branches have different dynamic ranges,

a memory for storing the digital signals from the plurality of signal receiver branches,

a calculation unit for calculation of signal strength values for each incoming digital signal sample, and

a decision switch for evaluating the signal strength values of the digital signals from the respective signal receiver branches, and for deciding which one of the stored digital signals will be forwarded based on the evaluating for further processing in the receiver

wherein each of the signal receiver branches comprises:

an attenuator means for attenuating the amplitude of the incoming analog signal by a unique, predetermined value,

an I/Q-demodulator to demodulate the analog signal to produce analog I- and Q-signals,

an A/D converter for converting the analog I- and Q- signals to I- and Q- digital signals,

a digital signal processor in communication with the memory for filtering and amplification of the digital I- and Q- signals.